

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION  
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> : <b>H04K 1/02</b>		<b>A1</b>	(11) International Publication Number: <b>WO 99/30455</b> (43) International Publication Date: <b>17 June 1999 (17.06.99)</b>
(21) International Application Number: <b>PCT/US98/26183</b> (22) International Filing Date: <b>10 December 1998 (10.12.98)</b> (30) Priority Data: <b>08/988,349</b> <b>10 December 1997 (10.12.97)</b> <b>US</b> (71)(72) Applicant and Inventor: <b>HAYES, Thomas, J. [US/US];</b> <b>4033 Tall Timber Drive, Allison Park, PA 15101 (US).</b> (74) Agent: <b>CARLETON, Dennis, M.; Thorp Reed &amp; Armstrong.</b> <b>One Riverfront Center, 5th floor, Pittsburgh, PA 15222 (US).</b>			(81) Designated States: <b>AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</b>

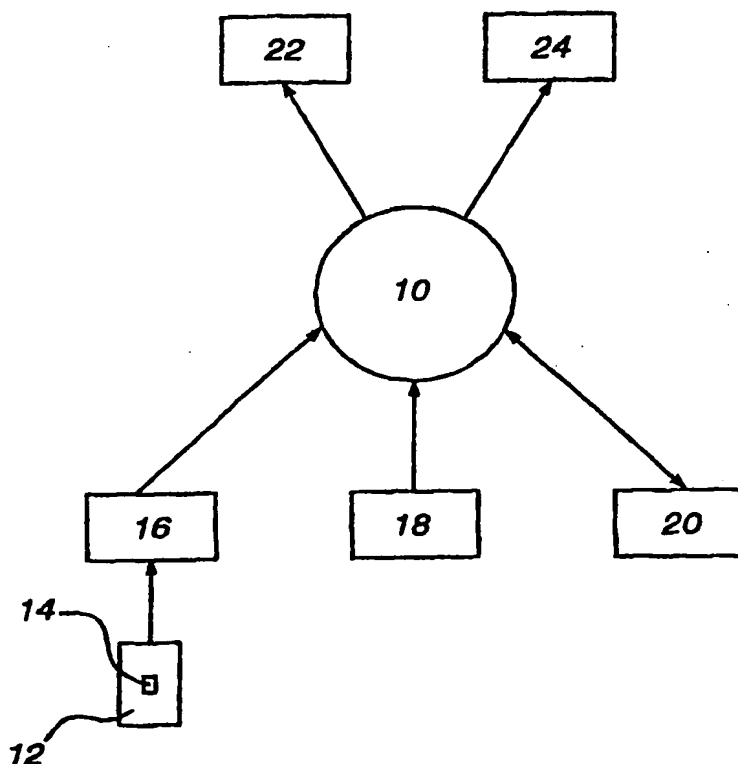
**Published**

*With international search report.  
Before the expiration of the time limit for amending the  
claims and to be republished in the event of the receipt of  
amendments.*

(54) Title: **TRADING CARDS CAPABLE OF INDEXING AND UNLOCKING RELATED DATA STORED ON A COMPUTER READABLE MEDIA**

(57) Abstract

An apparatus and method is specified wherein a traditional trading card (12) is enhanced with a unique identifier (14) that can be used to identify and "unlock" data related to the subject depicted on the trading card which is stored in a database on a local media readable from a drive (18) and/or over a network (20) and which is capable of being displayed by a typical personal computer, incorporating a reader for the trading card (16) and software (10) for retrieving and outputting information about the trading card, on a video display (22) and/or speakers (24).



**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon	KR	Republic of Korea	PL	Poland		
CN	China	KZ	Kazakhstan	PT	Portugal		
CU	Cuba	LC	Saint Lucia	RO	Romania		
CZ	Czech Republic	LI	Liechtenstein	RU	Russian Federation		
DE	Germany	LK	Sri Lanka	SD	Sudan		
DK	Denmark	LR	Liberia	SE	Sweden		
EE	Estonia			SG	Singapore		

5     **TRADING CARDS CAPABLE OF INDEXING AND UNLOCKING RELATED DATA**  
          **STORED ON A COMPUTER READABLE MEDIA**

10                   **BACKGROUND OF THE INVENTION**

1. Field Of The Invention

15             The present invention is related to the field of trading cards and, in particular, presents a means for providing a video and audio enhancement to a typical trading card through the use of a personal computer.

2. Description of the Related Art

20             The collecting of trading cards, especially those depicting sports figures, is more popular today than ever, attracting adults and children alike. One reason for this is that trading cards are now viewed both as a hobby and also as an investment, with the value of some cards extending into the hundreds and even thousands of dollars. The variety of cards available today covers a plethora of subject matter and has extended far from the original baseball-type cards first available in the early 20<sup>th</sup> century as promotions accompanying bubble gum and  
25     cigarettes. Some examples of the wide variety available include superheroes, actors and actresses from TV and the movies, cartoon characters, animals and other creatures, famous places, cars, planes and the like. Sports cards continue to be, however, the most popular of the trading card genre.

30             The typical trading card consists of a laminated cardboard approximately 2 ½" x 3 ½" in size, having a large image of the subject of the card on the front side and related information and possibly a smaller picture of the subject on the reverse side. In the case of a sports figure, for example, the front of the card would typically contain a large picture of the player in a posed or action shot, usually accompanied by the logo of the player's team, while  
35     the reverse of the card would contain information that would typically include career statistics and other trivia about the player.

The increase in the popularity of card collecting and the number of collectors has given rise to competition in the production of such cards. Some companies, to distinguish their product from others in the field, have taken to providing enhancements to their cards in the form of higher quality construction, foil laminations, holographic images and three dimensional animation effects using lenticular lenses. Such "premium" cards have increased desirability, appeal and collectability among enthusiasts. For example, a trading card made of sheet metal with rolled edges is disclosed in U.S. Patent No. 5,667,876 to Radlicz, et al., a trading card with a three dimensional effect is disclosed in U.S. Patent No. 5,471,431 to Gluck, et al. and a trading card with an iridescent substrate is disclosed in U.S. Patent No. 5,635,283 to Lovison. Some manufacturers have even begun to produce so-called "active" trading cards, which have circuitry built in to play a sound clip. Such cards are disclosed in U.S. Patent Nos. 5,641,164 to Doederlein, et al., 5,588,678 to Young and 5,480,156, also to Doederlein, et al.

The next logical step in the evolution of trading cards is the interface thereof with a personal computer to provide further "active" features. Such a system is described in U.S. Patent No. 5,533,124 to Smith, et al., entitled ELECTRONIC TRADING CARD SYSTEM. Here, the physical trading card is replaced by a electronic version stored on a computer readable media, such as a compact disk read only memory (CDROM) or a digital versatile disk (DVD), which, in addition to providing the typical still picture and statistics available on traditional trading cards, is also capable of providing added graphics, text, action video and sound clips. The problem with such a system is that the physical hard embodiment of the card is lost, and with it the desirability, collectability and long-term appeal of the traditional trading card. As such, U.S. Patent No. 5,533,124 represents a good idea taken to an extreme. It is therefore an object of this invention to provide an enhanced trading card capable of taking advantage of the capabilities of the personal computer while also preserving the "hard copy" feel, and therefore the appeal, of the traditional trading card.

## SUMMARY OF THE INVENTION

An apparatus and method is specified wherein an enhanced traditional trading card is used to identify and "unlock" related data stored on a computer-readable media and capable of being displayed by a typical personal computer. As an example, a trading card depicting a baseball player may index and unlock data containing video clips of the player's on-field performances, sound clips containing interviews and the like, and extensive statistics, while a trading card showing, for example, a famous place, could show the location, give directions,

and provide a history of the cite. In general, the idea is to use an external key to unlock encoded data stored within the computer.

5 In the preferred embodiment of the invention, the data related to the individual trading cards is stored on a computer readable media, such as a CDROM or a DVD, although in practice, there is no reason why the data could not be stored elsewhere, such as on a permanent hard disk within the computer, on a floppy disk, or on another computer accessible over a network. In order to access the information, a typical personal computer (PC) is used which is equipped with the hardware necessary to access the data, such as a CDROM drive or  
10 a network connection. If stored on CDROM or DVD disk, one disk could provide all of the related data for an entire series of cards, for example, all 1997 major league baseball cards.

The data is stored in an encoded or encrypted form at the source and cannot be decoded in the absence of the traditional related trading card. An interface is therefore needed  
15 with the PC in order to allow the reading of information from the trading card which can uniquely identify the card within a series, or, if the information is being accessed over the Internet, information which can identify both the series and the card within the series. In the preferred embodiment, the trading cards are provided with an integrated circuit chip, which may be embedded between the laminated layers of the card or on the surface of the card,  
20 which contains information which can be read by a device interfaced to the computer. However, any means of uniquely identifying the card could be used, such as printing a bar code on the card which can be read by a bar code reader attached to the PC, or encoding the information in a magnetic strip on the card of the type typically found on the reverse side of credit cards and ATM cards. The key is that the trading card must be present at the PC in  
25 order to view the related data.

In addition, software must be provided which will run on the PC which is capable of reading the unique identifier from the trading card, retrieving the related data from the source, be it a CDROM, a network connection, or otherwise, and displaying the related data in a  
30 meaningful way. The method of display is dependent, of course, on the type of data which is retrieved, for example, video, still pictures, sound and text. The software must therefore also be capable of determining the type of data which has been retrieved.

This arrangement preserves the appeal and collectability of the traditional trading  
35 card since the cards still conform to the traditional model of the "hard copy" trading card. As such, the cards described in the present invention are still desirable as collectibles in and of themselves even without the added appeal provided by the related computer-readable data. In

addition, since the cards are necessary to unlock the related data, providing the data to collectors, even on a minimal or no-cost basis, will not destroy the market for the cards themselves, but will only enhance the desirability of the cards.

5

## **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

Figure 1 is a block diagram showing the components of the system, which is described in detail below.

10

Trading card 12 contains identifying information 14. Identifying information 14 may be embodied in any well known machine readable format, such as a bar code, but in the preferred embodiment is contained in a chip embedded between the laminated layers of trading card 12. Trading card 12 is inserted into or scanned in front of reader 16, which is capable of reading identifying information 14 from trading card 12.

15

Software 10, which is run on a personal computer, reads identifying information 14 from reader 16. The related data is then read from CDROM, DVD or internal hard drive 18 or from a network 20, such as the Internet, or any one of a number of commercial on-line services. It is intended that, if the data is to be read from a CDROM or a DVD, the media be removable from the drive, such that different disks, containing different sets of data related to different series of cards, can be utilized. Software 10 is capable of discerning the type of data read from drive 18 or network 20, decoding the data and displaying it in an appropriate way on video display 22 or outputting it, in the case of sound, via speakers 24.

25

The related data may be in the form of still or moving video with or without sound, text data or any other pertinent information in any format related to the subject displayed on trading card 12. In order to avoid destroying the market for trading card 12, it must be necessary that trading card 12 be present before that related data can be decoded and displayed. Once this criteria is met, the media containing the related data can be given away or sold at a very low price in order to increase the appeal of trading cards 12.

30

## I Claim:

1. An apparatus for indexing and retrieving information from an information source comprising:

5 (a) a series of keys, each of said keys bearing an identifier unique within said series;

(b) a device for reading said unique identifier from one of said keys, said device connected to a computer;

10 (c) an information source containing information of one of a plurality of types, said information being related to said keys;

(d) a device for reading said information from said information source, said device connected to said computer; and

15 (e) software, running on said computer, said software being capable of determining which of said information to retrieve from said information source based on said unique identifier of said key and outputting said information in a manner dependent upon said type of said information retrieved.

2. The apparatus of claim 1 wherein said key is a trading card.

20 3. The apparatus of claim 2 wherein said unique identifier is encoded in a chip embedded in said trading card.

4. The apparatus of claim 2 wherein said unique identifier is encoded in a bar code printed on said trading card.

25 5. The apparatus of claim 2 wherein said unique identifier is encoded in a magnetic strip on said trading card.

30 6. The apparatus of claim 1 wherein said information source is a computer-readable media and wherein said device for reading said information is a drive.

7. The apparatus of claim 6 wherein said computer-readable media is selected from the group consisting of a hard magnetic disk, a floppy magnetic disk, a CDROM and a DVD.

35 8. The apparatus of claim 1 wherein said information source is a network.

- 5
- 10
- 15
- 20
- 25
- 30
- 35
9. The apparatus of claim 8 where said network is the Internet.
  10. The apparatus of claim 8 wherein said device for reading said information from said information source is a modem.
  11. The apparatus of claim 1 wherein said information is encrypted.
  12. The apparatus of claim 9 wherein said information can be properly decrypted only with said unique identifier from said key.
  13. The apparatus of claim 1 wherein said information is of a type selected from the group consisting of text, still pictures, moving video, and sound.
  14. The apparatus of claim 1 wherein said information is output on a device selected from the group consisting of a video display, one or more speakers and a printer.
  15. A method for indexing and retrieving information from an information source comprising:
    - (a) reading an identifier from a key, said identifier being unique within a series of said keys;
    - (b) indexing and retrieving information from an information source using said identifier; and
    - (c) outputting said information such that it is perceivable by a human.
  16. The method of claim 15 wherein said key is a trading card.
  17. The method of claim 15 wherein said information is encrypted and can only be properly decrypted with said identifier.
  18. An apparatus for indexing and retrieving information from an information source comprising:
    - (a) a series of trading cards, each of said trading cards bearing a subject indicia and an identifier which is unique within said series;
    - (b) a device for reading said unique identifier from one of said trading cards, said device connected to a computer;
    - (c) a database containing data related to said subject indicia of said series of trading cards;



(d) software, running on said computer, said software being capable of determining which data to retrieve from said computer-readable media based on said unique identifier of said trading card, determining how said data should be output, and outputting said data in a manner consistent with said determination.

5

19. The apparatus of claim 18 wherein said information is encrypted and can only be properly decrypted with said identifier.

10

20. The apparatus of claim 18 wherein said database is located on a local computer-readable media or is accessible over a network.

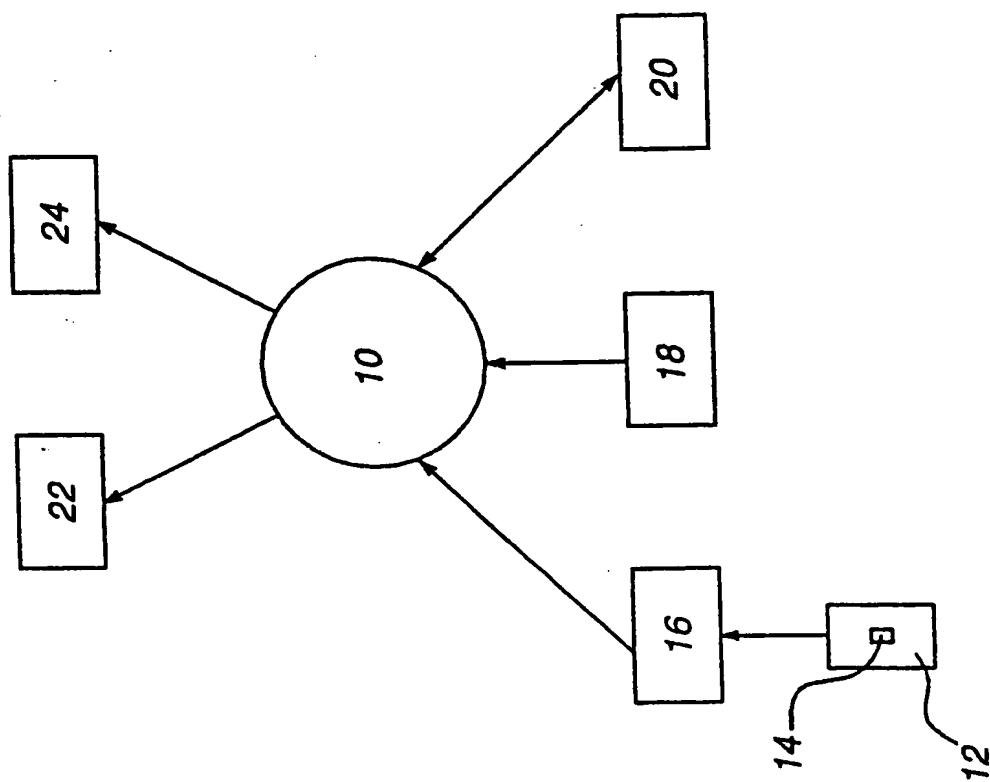


FIG. 1

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/26183

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) : H04K1/02

US CL : 380/9

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 380/4, 5, 9, 25, 49; 707/1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P --- Y,P	US 5,703,951 A (DOLPHIN) 30 December 1997, col. 1, lines 28-37, col. 2, lines 62-66, col. 3, lines 3-19, col. 3, lines 30-33, col. 4, lines 12-24, col. 4, lines 32-34, col. 4, lines 39-42, figure 1, item 26.	1, 6, 11, 13 15, 17 --- 2-5, 7-10, 12, 14, 16,
X,P --- Y,P	US 5,748,731 A (SHEPHERD) 05 May 1998, col. 5, lines 18-46, col. 5, lines 39-46, col. 7, lines 16-37, figure 1, figure 2, figure 3, items 16, 20, 22, figure 6, items 64, 50, 56, 58.	18, 19 --- 2-5, 16, 20
Y	US 5,411,259 A (PEARSON et al.) 02 May 1995, col. 2, lines 44-50, figure 1, item 21.	4, 5

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X*	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*B* earlier document published on or after the international filing date	*Y*	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*Z*	document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means		
*P* document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

09 MARCH 1999

Date of mailing of the international search report

09 APR 1999

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

JUSTIN T. DARROW *Regina Zeger*

Telephone No. (703) 305-3908

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US98/26183

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,677,953 A (DOLPHIN) 14 October 1997, col. 3, lines 3-5, col. 4, lines 34-37, col. 4, lines 45-55, col. 5, lines 1-12.	7-10, 12, 20
Y,P	US 5,809,245 A (ZENDA) 15 September 1998, col. 5, lines 26-67, col. 6, lines 1-2, figure 18, item 121.	7
Y	US 5,499,221 A (ITO et al.) 12 March 1996, col. 4, lines 13-24.	14
Y	US 5,590,317 A (IGUCHI et al.) 31 December 1996, col. 25, lines 11-15, figure 8, item 1116.	14